Operating Manual - English

FUJITSU

PRIMERGY TX100 S3 Server

Operating Manual

Edition November 2011

Downloaded from www.Manualslib.com manuals search engine

Comments… Suggestions… Corrections…

The User Documentation Department would like to know your opinion of this manual. Your feedback helps us optimize our documentation to suit your individual needs.

Feel free to send us your comments by e-mail to manuals@ts.fujitsu.com.

Certified documentation according to DIN EN ISO 9001:2008

To ensure a consistently high quality standard and user-friendliness, this documentation was created to meet the regulations of a quality management system which complies with the requirements of the standard DIN EN ISO 9001:2008.

cognitas. Gesellschaft für Technik-Dokumentation mbH
www.cognitas.de

Copyright and Trademarks

Copyright © 2011 Fujitsu Technology Solutions GmbH.

All rights reserved.
Delivery subject to availability; right of technical modifications reserved.

All hardware and software names used are trademarks of their respective manufacturers.

– The contents of this manual may be revised without prior notice.
– Fujitsu assumes no liability for damages to third party copyrights or other rights arising from the use of any information in this manual.
– No part of this manual may be reproduced in any without the prior written permission of Fujitsu.

Microsoft, Windows, Windows Server, and Hyper V are trademarks or registered trademarks of Microsoft Corporation in the USA and other countries.

Intel and Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the USA and other countries.

Downloaded from www.Manualslib.com manuals search engine

Before reading this manual

For your safety

This manual contains important information for safely and correctly using this product.

Carefully read the manual before using this product. Pay particular attention to the accompanying manual "Safety Notes and Regulations" and ensure these safety notes are understood before using the product. Keep this manual and the manual "Safety Notes and Regulations" in a safe place for easy reference while using this product.

Radio interference

This product is a "Class A" ITE (Information Technology Equipment). In a domestic environment this product may cause radio interference, in which case the user may be required to take appropriate measures. VCCI-A

Aluminum electrolytic capacitors

The aluminum electrolytic capacitors used in the product's printed circuit board assemblies and in the mouse and keyboard are limited-life components. Use of these components beyond their operating life may result in electrolyte leakage or depletion, potentially causing emission of foul odor or smoke.

As a guideline, in a normal office environment (25°C) operating life is not expected to be reached within the maintenance support period (5 years). However, operating life may be reached more quickly if, for example, the product is used in a hot environment. The customer shall bear the cost of replacing replaceable components which have exceeded their operating life. Note that these are only guidelines, and do not constitute a guarantee of trouble-free operation during the maintenance support period.

High safety use

This product has been designed and manufactured for general uses such as general office use, personal use, domestic use and normal industrial use. It has not been designed or manufactured for uses which demand an extremely high level of safety and carry a direct and serious risk to life or body if such safety cannot be ensured.

Downloaded from www.Manualslib.com manuals search engine

These uses include control of nuclear reactions in nuclear power plants, automatic airplane flight control, air traffic control, traffic control in mass transport systems, medical devices for life support, and missile guidance control in weapons systems (hereafter, "high safety use"). Customers should not use this product for high safety use unless measures are in place for ensuring the level of safety demanded of such use. Please consult the sales staff of Fujitsu if intending to use this product for high safety use.

Measures against momentary voltage drop

This product may be affected by a momentary voltage drop in the power supply caused by lightning. To prevent a momentary voltage drop, use of an AC uninterruptible power supply is recommended.

(This notice follows the guidelines of Voltage Dip Immunity of Personal Computer issued by JEITA, the Japan Electronics and Information Technology Industries Association.)

Technology controlled by the Foreign Exchange and Foreign Trade Control Law of Japan

Documents produced by Fujitsu may contain technology controlled by the Foreign Exchange and Foreign Trade Control Law of Japan. Documents which contain such technology should not be exported from Japan or transferred to non-residents of Japan without first obtaining authorization in accordance with the above law.

Harmonic Current Standards

This product conforms to harmonic current standard JIS C 61000-3-2.

Downloaded from www.Manualslib.com manuals search engine

Only for the Japanese market: About SATA hard disk drives

The SATA version of this server supports hard disk drives with SATA / BC-SATA storage interfaces. Please note that the usage and operation conditions differ depending on the type of hard disk drive used.

Please refer to the following internet address for further information on the usage and operation conditions of each available type of hard disk drive:

http://primeserver.fujitsu.com/primergy/harddisk/

Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

Contents

1 Introduction 11

1.1 Concept and target groups for this manual 11
1.2 Documentation overview 12
1.3 Notational conventions 14

2 Functional overview 15

2.1 Features 15
2.2 Server specification 20

3 Installation steps, overview 25

4 Important information 27

4.1 Safety instructions 27
4.2 ENERGY STAR 36
4.3 CE conformity 38
4.4 FCC Class A Compliance Statement 39
4.5 Transporting the server 40
4.6 Environmental protection 41

5 Hardware installation 43

5.1 Unpacking the server 44
5.2 Setting up the server 45
5.3 Connecting devices to the server 46
5.4 Connecting the server to the mains 47
5.5 Notes on connecting/disconnecting cables 49

Downloaded from www.Manualslib.com manuals search engine

6 Starting up and operation 51

6.1 Opening the server 51

6.2 Control elements and indicators 52
6.2.1 Front of the server 52
6.2.1.1 Control elements 53
6.2.1.2 Indicators on the control panel 53
6.2.2 Rear of server 54
6.2.2.1 Indicators on the connector panel: LAN indicators 54

6.3 Switching the server on and off 55

6.4 Configuring the server 59
6.4.1 Configuring the onboard SATA controller 59
6.4.2 Configuring the SAS/SATA RAID controller 60
6.4.3 Configuring the server and installing the operating system with the ServerView Installation Manager 61
6.4.4 Configuring the server and installing the operating system without the ServerView Installation Manager 62

6.5 Cleaning the server 63

7 Property and data protection 65

7.1 BIOS Setup security functions 65

8 Troubleshooting and tips 67

8.1 Power-on indicator remains unlit 67

8.2 Server switches itself off 68

8.3 Screen remains blank 68

8.4 Flickering stripes on monitor screen 69

8.5 No screen display or display drifts 69

8.6 No mouse pointer displayed on screen 69

8.7 Incorrect date and time 70

8.8 Drives reported as “dead” when starting system 70

8.9 Added drive reported as defective 70

8.10 Error message on screen 71

Downloaded from www.Manualslib.com manuals search engine

8.11 Expansion cards or onboard devices not recognized 71
8.12 Temperature warning 71
8.13 No effect of keyboard or mouse 71
8.14 Optical drive cannot read data 72

Downloaded from www.Manualslib.com manuals search engine

Contents

Downloaded from www.Manualslib.com manuals search engine

1 Introduction

The PRIMERGY TX100 S3 server is an Intel-based server for workgroups and small networks. The server is suitable for use as a file server and also as an application, information or Internet server.

Thanks to its highly developed hardware and software components, the PRIMERGY TX100 S3 server offers a high level of data security and availability.

Security functions in the *BIOS-Setup* and on the system board protect the data on the server against manipulation. The supported RAID levels allow the hard disk controllers to offer error tolerance, through data redundancy, for users who want to provide complete protection for valuable data.

Its low noise level and high energy efficiency make it ideal for office environments.

1.1 Concept and target groups for this manual

This operating manual describes how to install, set up and operate your server.

This operating manual is intended for those responsible for installing the hardware and ensuring that the system runs smoothly. It contains all the information you need to put your PRIMERGY TX100 S3 into operation.

To understand the various expansion options, you will need to be familiar with the fields of hardware and data transmission and you will require a basic knowledge of the underlying operating system.

Downloaded from www.Manualslib.com manuals search engine

1.2 Documentation overview

More information on your PRIMERGY TX100 S3 can be found in the following documents:

– "Quick Start Hardware - PRIMERGY TX100 S3" leaflet
(only included as a printed copy)

– "Quick Start Software - Quick Installation Guide" DVD booklet
(only included with the ServerView Suite as a printed copy)

– "Safety Notes and Regulations" manual
" 安全上のご注意 " for the Japanese market

– "Warranty" manual
" 保証書 " for the Japanese market

– "ServerView Suite Local Service Concept - LSC" manual

– "Returning used devices" manual and "Service Desk" leaflet
" サポート＆サービス " for the Japanese market

– "PRIMERGY TX100 S3 Server Upgrade and Maintenance Manual"

– "System Board D3009 for PRIMERGY TX100 S3 Technical Manual"

– “D3009 BIOS Setup Utility for PRIMERGY TX100 S3 Reference Manual"

Downloaded from www.Manualslib.com manuals search engine

PRIMERGY manuals are available in PDF format on the ServerView Suite DVD 2. The ServerView Suite DVD 2 is part of the ServerView Suite supplied with every server.

If you no longer have the ServerView Suite DVDs, you can obtain the relevant current versions using the order number U15000-C289 (the order number for the Japanese market: please refer to the configurator of the server *http://primeserver.fujitsu.com/primergy/system/*).

The PDF files of the manuals can also be downloaded free of charge from the Internet. The overview page showing the online documentation available on the Internet can be found using the URL (for EMEA market): *http://manuals.ts.fujitsu.com*. The PRIMERGY server documentation can be accessed using the *Industry standard servers* navigation option.

For the Japanese market:

Please refer to the following URL for the latest product manuals:
http://primeserver.fujitsu.com/primergy/manual/

Before using the product, please check for additional information that may be available under the following URL:
http://primeserver.fujitsu.com/primergy/products/note/

Further sources of information:

– ServerView Suite Glossary on the ServerView Suite DVD 2
– Manual for the monitor
– Documentation for the boards and drives
– Operating system documentation
– Information files in your operating system

Downloaded from www.Manualslib.com manuals search engine

1.3 Notational conventions

The following notational conventions are used in this manual:

Text in italics	indicates commands or menu items.
"Quotation marks"	indicate names of chapters and terms that are being emphasized.
►	describes activities that must be performed in the order shown.
CAUTION!	pay particular attention to texts marked with this symbol. Failure to observe this warning may endanger your life, destroy the system or lead to the loss of data.
	indicates additional information, notes and tips.

Downloaded from www.Manualslib.com manuals search engine

2 Functional overview

This section provides information on the features and technical data of the PRIMERGY TX100 S3 server. For information on key characteristics and layout of the system board, see "System Board D3009 for PRIMERGY TX100 S3 Technical Manual".

2.1 Features

Intel® Celeron®, Xeon®, Pentium®, or Core i3 processor

The server has an Intel® Celeron®, Xeon®, Pentium®, or Core i3 processor for high-speed data processing.

System board

The features of the system board are described in the "System Board D3009 for PRIMERGY TX100 S3 Technical Manual" for the hardware and in the "System Board D3009 BIOS Setup Utility for PRIMERGY TX100 S3" manual for the firmware.

Trusted Platform Module (TPM)

A Trusted Platform Module (TPM) for safer storage of keys can be implemented as an option. This module enables programs from third party manufacturers to store key information (e.g. drive encryption using Windows Bitlocker Drive Encryption).

The TPM is activated via the BIOS system (for more information, refer to the “System Board D3009 BIOS Setup Utility for TX100 S3" manual).

CAUTION!

– When using the TPM, note the program descriptions provided by the third party manufacturers.

– You must also create a backup of the TPM content. To do this, follow the third party manufacturer's instructions. Without this backup, if the TPM or the system board is faulty you will not be able to access your data.

Downloaded from www.Manualslib.com manuals search engine

– If a failure occurs, please inform your service about the TPM activation before it takes any action, and be prepared to provide them with your backup copies of the TPM content.

Hard disk drives

Up to four SATA hard disk drives, each with a maximum height of 1 inch, are built into the drive cages. There is a wire connection to the controller.

The server comes with an onboard SATA controller.

An optional SAS/SATA RAID controller can be plugged into one of the I/O slots (preferred slot 3).

Onboard SATA controller

A SATA controller is integrated on the system board; up to four SATA hard disk drives can be connected to the controller. The LSI Embedded MegaRAID software (SATA Software RAID) supports RAID levels 0, 1 and 10.

For more information on configuring the controller, see section "Configuring the onboard SATA controller" on page 59.

SAS/SATA RAID controller

The server is available with the following SAS/SATA RAID controllers for operating the internal SAS/SATA hard disk drives:

– Modular RAID 0/1 controller with "Integrated Mirroring Enhanced" (SAS IME) for SAS1.0

  RAID levels 0, 1 and 1E are supported for internal hard disk drive configurations.

– Modular RAID 0/1 controller with "MegaRAID functionality" (SAS MegaRAID) for SAS1.0 and SAS2.0

  RAID levels 0, 1,10 and 1E are supported for internal hard disk drive configurations.

– Modular RAID 5/6 controller with "MegaRAID functionality" (SAS MegaRAID) for SAS1.0 and SAS2.0

  RAID levels 0, 1, 10, 1E, 5, 50, 6 and 60 are supported for internal hard disk drive configurations. As an option, a battery backup unit (BBU) can save the memory content even if the power fails. Cache memory size of 512 Mbyte is available.

Downloaded from www.Manualslib.com manuals search engine

For more information on configuring the controller, see section "Configuring the SAS/SATA RAID controller" on page 60.

Further information on SAS/SATA RAID controllers is provided in the "Modular RAID Controller Installation Guide" (on ServerView Suite DVD 2 under *Industry Standard Servers* - *Expansion Cards* - *Storage Adapters* - *LSI RAID / SCSI Controllers*).

Further information on other SAS/SATA RAID controllers (e.g. for operating external SAS/SATA hard disk drives or tape drives) is available on ServerView Suite DVD 2 under *Industry Standard Servers* - *Expansion Cards* - *Storage Adapters* - *LSI RAID / SCSI Controllers*.

Accessible drives

The first (top) bay contains the server's DVD drive.

The 5.25-inch bay below is available for one additional accessible drive (CD/DVD drives or a magnetic tape drive).

The accessible drives cannot be replaced during operation.

Power supply

The server has a permanently installed power supply unit that adjusts automatically to any mains voltage in the range 100 V - 240 V. There are two different types:

– a power supply unit with up to 85% efficiency
– a power supply unit with up to 94% energy efficiency and 0-Watt functionality

High level of availability and data security

When memory data is accessed, 1-bit errors are identified in the main memory and automatically corrected with the error correcting code (ECC) method.

ASR&R (Automatic Server Reconfiguration and Restart) restarts the system in the event of an error and automatically "hides" the defective system components.

The PDA (Prefailure Detection and Analysis) technology from Fujitsu analyzes and monitors all components that are critical for system reliability.

A RAID controller supports different RAID levels and increase the availability and data security of the system.

Downloaded from www.Manualslib.com manuals search engine

Server management

Server management is implemented using the ServerView Operations Manager supplied and the PDA (Prefailure Detection and Analysis) technology from Fujitsu. PDA reports the threat of a system error or overload at an early stage, allowing preventive measures to be taken.

The ServerView Operations Manager enables the management of all PRIMERGY servers in the network via a central console. The ServerView Operations Manager supports the following functions:

- Round-the-clock monitoring, regardless of server status
- Temperature monitoring of the CPU and the surrounding area
- Detailed status and error reports for processors and main memory
- Watchdog timer for Automatic Server Reconfiguration and Restart (ASR&R) in the event that memory modules or processors fail
- Watchdog timer for monitoring the operating system with ASR&R

Further information on the ServerView Operations Manager is provided in the associated documentation.

Downloaded from www.Manualslib.com manuals search engine

ServerView Installation Manager

You can configure the PRIMERGY server quickly and precisely with the ServerView Installation Manager software provided. User-guided menus are available for installing the server operating system (for further details see section "Configuring the server" on page 59).

Service and support

PRIMERGY servers are easy to maintain and modular, thus enabling quick and simple maintenance.

The handles and locks (touch point) used to exchange components are colored green to ensure simple and immediate recognition.

In order to prevent the components from being damaged by incorrect handling when they are being installed and removed, the areas of all components that can be touched without damaging them are also marked green.

The Flash EPROM program supplied with the Fujitsu utilities supports a fast BIOS update.

ServerView Remote Management

ServerView Remote Management is the remote management solution from Fujitsu for PRIMERGY servers. ServerView Remote Management and the relevant hardware components integrated on the system board allow remote monitoring and maintenance as well as fast restoration of operation in the event of errors.

Remote monitoring and maintenance avoids time-consuming and costly on-site repairs and reduces service costs. This leads to a reduction in the total cost of ownership and an excellent return on investment for the remote management solution.

Downloaded from www.Manualslib.com manuals search engine

2.2 Server specification

This section explains the specifications for the server. The specifications for this server are liable to be updated without any notice. Please be forewarned.

System Board

System board type	D3009
Chipset	Intel® C202

Processor

Processor quantity and type	1x Intel® Celeron®/Xeon®/Pentium®/Core i3 processor

Memory Modules Configuration

Memory slots	4
Memory slot type	DIMM (DDR3)
Memory capacity (min. - max.)	2 GB - 32 GB
Memory protection	ECC
Memory notes	1333 MHz memory modules with 2, 4, or 8 GB

Interfaces

USB connectors	9 x USB 2.0 (2x front, 6x rear, 1x internal for backup device
Graphics (15-pin)	1 x VGA
Serial 1 (9-pin)	1 x serial RS-232
LAN / Ethernet (RJ-45)	2 x Gbit/s Ethernet

Downloaded from www.Manualslib.com manuals search engine

Onboard or integrated controllers

Serial ATA total	6
RAID Controller	4 port SATA with RAID 0 / 1 for HDDs
SATA Controller	Intel® C202
LAN Controller	Intel® 82574L and Intel® 82579LM onboard, 2 x 10/100/1000 Mbit/s, PXE-Boot by LAN via PXE-Server, Teaming supported
Trusted Platform Module (TPM)	Infineon / 1.2 (option)

Slots

PCI-Express Gen2 x1	1x (mechanically x4)
PCI-Express Gen2 x4	1x (mechanically x4)
PCI-Express Gen2 x8	1x
PCI-Express Gen2 x8	1x (mechanically x16)

Drive bays

Hard disk bay configuration	4x 3,5-inch easy change SATA
Accessible drives	2 (one bay is occupied by DVD/DVD-RW, 5.25-inch)

Operating Panel

Operating buttons	On/off switch
Status LEDs	Power (green)

Downloaded from www.Manualslib.com manuals search engine

Dimensions / Weight

Tower (W x D x H)	175 x 419 x 395 mm
Weight	max. 14 kg (depending on configuration)

Ventilation clearance

At least 200 mm on the front and rear.

Ambient conditions

Environment class 3K2 Environment class 2K2	EN 60721 / IEC 721 Part 3-3 EN 60721 / IEC 721 Part 3-2
Temperature: Operation (3K2) Transport (2K2)	 10 °C ... 35 °C -25 °C ... 60 °C
Humidity	10% ... 85% (non condensing)

Condensation during operation must be avoided!

Noise level

Sound power level L_{WAd} (ISO 9296)	< 3.9 B (standby) < 3.9 B (operation)
Sound pressure level at adjacent position L_{pAm} (ISO 9296)	< 25 dB (A) (standby) < 25 dB (A) (operation)

Electrical values

Power supply configuration	1x standard power supply
Max. output	250 W
Rated voltage range	100 V - 240 V
Rated frequency range	50 Hz - 60 Hz
Rated current	max. 4.0 A – 2.0 A (100 V / 240 V)

Downloaded from www.Manualslib.com manuals search engine

Power supply configuration	1x 0-Watt power supply
Max. output	250 W
Rated voltage range	100 V - 240 V
Rated frequency range	50 Hz - 60 Hz
Rated current	max. 5.0 A – 2.5 A (100 V / 240 V)

Downloaded from www.Manualslib.com manuals search engine

Compliance with regulations and standards

Product safety and ergonomics	
International	IEC 60950-1 2ed.
Europe	
Safety	EN 60950-1 2ed. EN 50371 EN 50392
Ergonomics	ISO 9241-3 EN 2941-3 EK1-ITB 2003:2007
USA / Canada	CSA-C22.2 No. 60950-1-07 2ed. UL 60950-1 2ed.
Taiwan	CNS 14336
China	GB 4943
Electromagnetic compatibility	
International	CISPR 22
Europe	EN 55022 Class A EN 55024 EN 61000-3-2 EN 61000-3-3 ETSI 300386
USA / Canada	47CFR part 15 Class A / ICES-003
Taiwan	CNS 13438 Class A
China	GB 9245 / GB 17625
Japan	VCCI Class A / JEITA
Korea	KN 22 / KN 24
CE marking to EU directives	Low Voltage Directive 2006/95/EC Electromagnetic compatibility 2004/108/EC

Downloaded from www.Manualslib.com manuals search engine

3 Installation steps, overview

This chapter contains an overview of the steps necessary to install your server. Links take you to sections where you can find more detailed information about the respective steps:

- First of all, it is essential that you familiarize yourself with the safety information in chapter "Important information" on page 27.
- Transport the server to the place where you want to set it up.
- Unpack all parts, check the contents of the package for visible transport damage and check whether the items delivered match the details on the delivery note (see section "Unpacking the server" on page 44).
- Make sure that all necessary manuals (see "Documentation overview" on page 12) are available; print out the PDF files if required.
- Components that have been ordered additionally may be delivered loose with the server. Install these in the server as described in the supplied documentation.
- Set up the server (see section "Setting up the server" on page 45).
- Wire the server. Follow the instructions in sections "Connecting devices to the server" on page 46 and "Notes on connecting/disconnecting cables" on page 49.
- Connect the server to the mains (see section "Connecting the server to the mains" on page 47).
- Familiarize yourself with the controls and indicators on the front and rear of the server (see section "Control elements and indicators" on page 52).
- Configure the server and install the desired operating system and applications. The following options are available:
  - Remote installation with the ServerView Installation Manager:

    With the ServerView Suite DVD 1 provided, you can configure the server and install the operating system in a convenient manner.

    Details on how to operate the ServerView Installation Manager, as well as some additional information, are included in the "ServerView Suite Installation Manager" user's guide (on ServerView Suite DVD 2 under *Industry Standard Servers - Software - ServerView Suite - Server Installation and Deployment*).

Downloaded from www.Manualslib.com manuals search engine

Configuration information can also be found in section "Configuring the server and installing the operating system with the ServerView Installation Manager" on page 61.

– Local configuration and installation with or without the ServerView Installation Manager (see section "Configuring the server and installing the operating system with the ServerView Installation Manager" on page 61 or section "Configuring the server and installing the operating system without the ServerView Installation Manager" on page 62).

You will find more information on installing the server remotely or locally in the "ServerView Suite Installation Manager" user's guide (on the ServerView Suite DVD 2 under *Industry Standard Servers - Software - ServerView Suite - Server Installation and Deployment*).

Downloaded from www.Manualslib.com manuals search engine

4 Important information

In this chapter you will find essential information regarding safety when working on your server.

4.1 Safety instructions

The following safety instructions are also provided in the manual "Safety Notes and Regulations" or " 安全上のご注意 ".

This device meets the relevant safety regulations for IT equipment. If you have any questions about whether you can install the server in the intended environment, please contact your sales outlet or our customer service team.

CAUTION!

- The actions described in this manual shall be performed by technical specialists. A technical specialist is a person who is trained to install the server including hardware and software.
- Repairs to the device that do not relate to CSS failures shall be performed by service personnel. Please note that unauthorized interference with the system will void the warranty and exempt the manufacturer from all liability.
- Any failure to observe the guidelines in this manual, and any improper repairs could expose the user to risks (electric shock, energy hazards, fire hazards) or damage the equipment.
- Before installing/removing internal options to/from the server, turn off the server, all peripheral devices, and any other connected devices. Also unplug all power cords from the power outlet. Failure to do so can cause electric shock.

Downloaded from www.Manualslib.com manuals search engine

Before starting up

CAUTION!

- During installation and before operating the device, observe the instructions on environmental conditions for your device (see "Ambient conditions" on page 22).
- If the server has been moved from a cold environment, condensation may form both inside and on the outside of the machine.

  Wait until the server has acclimatized to room temperature and is absolutely dry before starting it up. Material damage may be caused to the server if this requirement is not met.
- Only transport the server in the original packaging or in packaging that protects it from impacts and jolts.

Installation and operation

CAUTION!

- This unit should not be operated in ambient temperatures above 35 °C.
- If the unit is integrated into an installation that draws power from an industrial power supply network with an IEC309 connector, the power supply's fuse protection must comply with the requirements for non-industrial power supply networks for type A connectors.
- The unit automatically adjusts itself to a mains voltage in a range of 100 V - 240 V. Ensure that the local mains voltage lies within these limits.
- This device must only be connected to properly grounded power outlets or insulated sockets of the server's internal power supply with tested and approved power cords.
- Ensure that the device is connected to a properly grounded power outlet close to the device.

Downloaded from www.Manualslib.com manuals search engine

CAUTION!

- Ensure that the power sockets on the device and the properly grounded power outlets are freely accessible.
- The On/Off button or the main power switch (if present) does not isolate the device from the mains power supply. To disconnect it completely from the mains power supply, unplug all network power plugs from the properly grounded power outlets.
- Always connect the server and the attached peripherals to the same power circuit. Otherwise you run the risk of losing data if, for example, the server is still running but a peripheral device (e.g. memory subsystem) fails during a power outage.
- Data cables must be adequately shielded.
- Ethernet cabling has to comply with EN 50173 and EN 50174-1/2 standards or ISO/IEC 11801 standard respectively. The minimum requirement is a Category 5 shielded cable for 10/100 Ethernet, or a Category 5e cable for Gigabit Ethernet.
- Route the cables in such a way that they do not create a potential hazard (make sure no-one can trip over them) and that they cannot be damaged. When connecting the server, refer to the relevant instructions in this manual.
- Never connect or disconnect data transmission lines during a storm (risk of lightning hazard).
- Make sure that no objects (e.g. jewelry, paperclips etc.) or liquids can get inside the server (risk of electric shock, short circuit).
- In emergencies (e.g. damaged casing, controls or cables, penetration of liquids or foreign bodies), switch off the server immediately, remove all power plugs and contact your sales outlet or customer service team.

Downloaded from www.Manualslib.com manuals search engine

CAUTION!

- Proper operation of the system (in accordance with IEC 60950-1/2 resp. EN 60950-1/2) is only ensured if the casing is completely assembled and the rear covers for the installation slots have been fitted (electric shock, cooling, fire protection, interference suppression).
- Only install system expansions that satisfy the requirements and rules governing safety and electromagnetic compatibility and those relating to telecommunication terminals. If you install other expansions, they may damage the system or violate the safety regulations. Information on which system expansions are approved for installation can be obtained from our customer service center or your sales outlet.
- The components marked with a warning notice (e.g. lightning symbol) may only be opened, removed or exchanged by authorized, qualified personnel. Exception: CSS components can be replaced.
- The warranty is void if the server is damaged during installation or replacement of system expansions.
- Only set screen resolutions and refresh rates that are specified in the operating manual for the monitor. Otherwise, you may damage your monitor. If you are in any doubt, contact your sales outlet or customer service center.
- Before installing/removing internal options to/from the server, turn off the server, all peripheral devices, and any other connected devices. Also unplug all power cords from the outlet. Failure to do so can cause electric shock.
- Do not damage or modify internal cables or devices. Doing so may cause a device failure, fire, or electric shock.
- Devices inside the server remain hot after shutdown. Wait for a while after shutdown before installing or removing internal options.
- The circuit boards and soldered parts of internal options are exposed and can be damaged by static electricity. Before handling them, first touch a metal part of the server to discharge static electricity from your body.
- Do not touch the circuitry on boards or soldered parts. Hold the metallic areas or the edges of the circuit boards.

Downloaded from www.Manualslib.com manuals search engine

CAUTION!

- Install the screw removed during installation/detaching Internal Options in former device/position. To use a screw of the different kind causes a breakdown of equipment.
- The installation indicated on this note is sometimes changed to the kind of possible options without notice.

Batteries

CAUTION!

- Incorrect replacement of batteries may lead to a risk of explosion. The batteries may only be replaced with identical batteries or with a type recommended by the manufacturer (see the PRIMERGY TX100 S3 Server Upgrade and Maintenance manual).
- Do not throw batteries into the trash can.
- Batteries must be disposed of in accordance with local regulations concerning special waste.
- Replace the lithium battery on the system board in accordance with the instructions in the PRIMERGY TX100 S3 Server Upgrade and Maintenance manual.
- All batteries containing pollutants are marked with a symbol (a crossed-out garbage can). In addition, the marking is provided with the chemical symbol of the heavy metal decisive for the classification as a pollutant:

  Cd Cadmium
  Hg Mercury
  Pb Lead

Downloaded from www.Manualslib.com manuals search engine

Working with CDs/DVDs/BDs and optical drives

When working with devices with optical drives, these instructions must be followed.

CAUTION!

- Only use CDs/DVDs/BDs that are in perfect condition, in order to prevent data loss, equipment damage and injury.
- Check each CD/DVD/BD for damage, cracks, breakages etc. before inserting it in the drive.

  Note that any additional labels applied may change the mechanical properties of a CD/DVD/BD and cause imbalance.

  Damaged and imbalanced CDs/DVDs/BDs can break at high drive speeds (data loss).

  Under certain circumstances, sharp CD/DVD/BD fragments can pierce the cover of the optical drive (equipment damage) and can fly out of the device (danger of injury, particularly to uncovered body parts such as the face or neck).
- High humidity and airborne dust levels are to be avoided. Electric shocks and/or server failures may be caused by liquids such as water, or metallic items, such as paper clips, entering a drive.
- Shocks and vibrations are also to be avoided.
- Do not insert any objects other than the specified CDs/DVDs/BDs.
- Do not pull on, press hard, or otherwise handle the CD/DVD/BD tray roughly.
- Do not disassemble the optical drive.
- Before use, clean the optical disk tray using a soft, dry cloth.
- As a precaution, remove disks from the optical drive when the drive is not to be used for a long time. Keep the optical disk tray closed to prevent foreign matter, such as dust, from entering the optical drive.
- Hold CDs/DVDs/BDs by their edges to avoid contact with the disk surface.

Downloaded from www.Manualslib.com manuals search engine

- Do not contaminate the CD/DVD/BD surface with fingerprints, oil, dust, etc. If dirty, clean with a soft, dry cloth, wiping from the center to the edge. Do not use benzene, thinners, water, record sprays, antistatic agents, or silicone-impregnated cloth.
- Be careful not to damage the CD/DVD/BD surface.
- Keep the CDs/DVDs/BDs away from heat sources.
- Do not bend or place heavy objects on CDs/DVDs/BDs.
- Do not write with ballpoint pen or pencil on the label (printed) side.
- Do not attach stickers or similar to the label side. Doing so may cause rotational eccentricity and abnormal vibrations.
- When a CD/DVD/BD is moved from a cold place to a warm place, moisture condensation on the CD/DVD/BD surface can cause data read errors. In this case, wipe the CD/DVD/BD with a soft, dry cloth then let it air dry. Do not dry the CD/DVD/BD using devices such as a hair dryer.
- To avoid dust, damage, and deformation, keep the CD/DVD/BD in its case whenever it is not in use.
- Do not store CDs/DVDs/BDs at high temperatures. Areas exposed to prolonged direct sunlight or near heating appliances are to be avoided.

You can prevent damage from the optical drive and the CDs/DVDs/BDs, as well as premature wear of the disks, by observing the following suggestions:

- Only insert disks in the drive when needed and remove them after use.
- Store the disks in suitable sleeves.
- Protect the disks from exposure to heat and direct sunlight.

Laser information

The optical drive complies with IEC 60825-1 laser class 1.

CAUTION!

The optical drive contains a light-emitting diode (LED), which under certain circumstances produces a laser beam stronger than laser class 1. Looking directly at this beam is dangerous.

Never remove parts of the optical drive casing!

Downloaded from www.Manualslib.com manuals search engine

Modules with Electrostatic-Sensitive Devices

Modules with electrostatic-sensitive devices are identified by the following sticker:

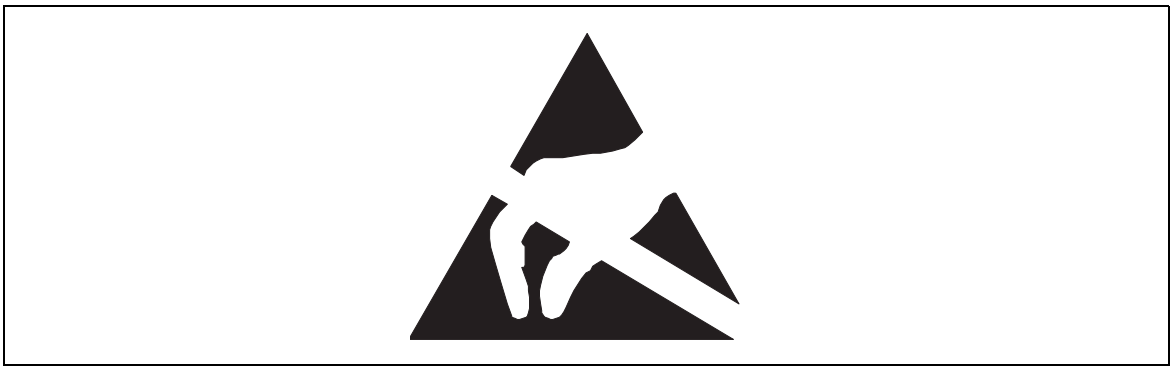

Figure 1: ESD label

When you handle components fitted with ESDs, you must always observe the following points:

- Switch off the system and remove the power plugs from the power outlets before installing or removing components with ESDs.
- You must always discharge static build-up (e.g. by touching a grounded object) before working with such components.
- Any devices or tools that are used must be free of electrostatic charge.
- Wear a suitable grounding cable that connects you to the external chassis of the system unit.
- Always hold components with ESDs at the edges or at the points marked green (touch points).
- Do not touch any connectors or conduction paths on an ESD.
- Place all the components on a pad which is free of electrostatic charge.

For a detailed description of how to handle ESD components, see the relevant European or international standards (EN 61340-5-1, ANSI/ESD S20.20).

Downloaded from www.Manualslib.com manuals search engine

Other important information:

- During cleaning, observe the instructions in section "Cleaning the server" on page 63.
- Keep this operating manual and the other documentation (such as the technical manual, documentation DVD) close to the device. All documentation must be included if the equipment is passed on to a third party.

Downloaded from www.Manualslib.com manuals search engine

4.2 ENERGY STAR

In typical configurations the PRIMERGY TX100 S3 satisfies the stringent requirements of the Ecolabel Energy Star for Computers Version 5.0. These requirements ensure energy savings and help to save money and reduce greenhouse gas emissions when computers are being used and performing a range of tasks, as well as when they are turned off or into a low power mode. For example, the power consumption of the PRIMERGY TX100 S3 in the operation mode “idle” is less than 65 W.

Products that have been certified compliant with ENERGY STAR and identified as such are in full compliance with the specification at shipping. Note that energy consumption can be affected by software that is installed or any changes that are made to the BIOS or energy options subsequently. In such cases, the properties guaranteed by ENERGY STAR can no longer be assured.

Detailed information concerning the requirements for the "Energy Star" eco-label, as well as products that satisfy these requirements, can be found on the Internet at *http://www.energystar.gov/* .

After you have installed your OS you can configure the energy saving settings by yourself (amongst others switch off the monitor ≤ 15 minutes). How you have to configure these energy saving settings is described in the documentation supplied with the OS.

The "ServerView Operations Manager" user guide contains instructions for reading out measurement values, including those relating to current energy consumption and air temperatures. Either the Performance Monitor or the Task Manager can be used to read out CPU utilization levels.

The system has a hibernate mode (S4 mode) from which it can be woken up via WOL (Wake-up On LAN). In order to use this feature, however, the S4 mode must be activated/enabled in the corresponding operating system installed.

The following description is an example and can only serve as a guide for other operating systems.

Downloaded from www.Manualslib.com manuals search engine

To bring your system into S4 mode (= hibernate mode), proceed as follows:

BIOS Setup

- In the *Power* menu of the BIOS setup, set the *0-Watt PC Feature* parameter to *Disabled*, if the installed power supply is a 0-Watt power supply.

Operating system Microsoft Windows 2008 Enterprise Edition

Activation

- Open a DOS shell using C:\Windows\System32\cmd.exe and enter the following command to activate S4 mode:

  powercfg -h ON

Configuration

To set the driver for the internal LAN controller:

- Open the *Device Manager* via *Start* - *Control Panel* - *System* - *Device Manager*.
- Select *Network Adapters*.
- Select one of the internal LAN controller: Intel® 82574L or 82579LM Gigabit Network Connection.
- Select *Properties* in the overview, and then select *Power Management*.
- In the Wake on LAN field, enable the following option:
  - *Wake on Magic packet*
- Press *OK*.

Execution

To execute the power down command in a DOS shell:

Using the **shutdown -h** command, your system saves all user data (e.g: open windows and running programs), shuts down the system, and transfers it to S4 mode.

Exiting the hibernate/idle state (S4 mode)

You switch on the system again either manually using the On/Off button or using the WOL function (WOL= Wake-up On LAN).

Downloaded from www.Manualslib.com manuals search engine

To do this, a Magic Packet with the MAC address of the system to be woken up is sent to the selected internal LAN controller.

You will find the valid MAC address for your selected LAN controller under:

Start - Control Panel - System - Device Manager - Network adapters - <selected LAN controller> - Link Speed - Identify Adapter - Permanent Ethernet Address.

LINUX operating systems

Activation

► To activate S4 mode, enter the following command:

resume=/dev/sdxx

Using this command, the memory area in which the data is saved is assigned at the same time.

Execution

Using the following command, the system is switched off and brought into S4 mode:

echo -n "disk" > /sys/power/state

Exiting the hibernate/idle state (S4 mode)

You switch on the system again either manually using the On/Off button or using the WOL function (WOL= Wake-up On LAN).

To do this, a Magic Packet with the MAC address of the system to be woken up is sent to the internal LAN controller.

4.3 CE conformity

The system complies with the requirements of the EC directives 2004/108/EC regarding "Electromagnetic Compatibility" and 2006/95/EC "Low Voltage Directive". This is indicated by the CE marking (CE = Communauté Européenne).

Downloaded from www.Manualslib.com manuals search engine

4.4 FCC Class A Compliance Statement

If there is an FCC statement on the device, it applies to the products covered in this manual, unless otherwise specified herein. The statement for other products will appear in the accompanying documentation.

NOTE:

This equipment has been tested and found to comply with the limits for a "Class A" digital device, pursuant to Part 15 of the FCC rules and meets all requirements of the Canadian Interference-Causing Equipment Standard ICES-003 for digital apparatus. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in strict accordance with the instructions, may cause harmful interference to radio communications. However, there is no warranty that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Fujitsu is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Fujitsu. The correction of interferences caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

The use of shielded I/O cables is required when connecting this equipment to any and all optional peripheral or host devices. Failure to do so may violate FCC and ICES rules.

WARNING:

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Downloaded from www.Manualslib.com manuals search engine

4.5 Transporting the server

CAUTION!

Only transport the server in its original packaging or in packaging that protects it from impacts and jolts. Do not unpack the server until it is at its installation location.

If you need to lift or transport the server, ask other people to help you.

Downloaded from www.Manualslib.com manuals search engine

4.6 Environmental protection

Environmentally-friendly product design and development

This product has been designed in accordance with the Fujitsu standard for "environmentally friendly product design and development". This means that key factors such as durability, selection and labeling of materials, emissions, packaging, ease of dismantling and recycling have been taken into account.

This saves resources and thus reduces the harm done to the environment. Further information can be found at:

– *http://ts.fujitsu.com/products/standard_servers/index.html* (for the EMEA market)
– *http://primeserver.fujitsu.com/primergy/concept/* (for the Japanese market)

Energy-saving information

Devices that do not need to be constantly switched on should be switched off until they are needed as well as during long breaks and after completion of work.

Packaging information

This packaging information doesn’t apply to the Japanese market.

Do not throw away the packaging. You may need it later for transporting the system. If possible, the equipment should only be transported in its original packaging.

Information on handling consumables

Please dispose of printer consumables and batteries in accordance with the applicable national regulations.

In accordance with EU directives, batteries must not be disposed of with unsorted domestic waste. They can be returned free of charge to the manufacturer, dealer or an authorized agent for recycling or disposal.

All batteries containing pollutants are marked with a symbol (a crossed-out garbage can). They are also marked with the chemical symbol for the heavy metal that causes them to be categorized as containing pollutants:

Cd Cadmium
Hg Mercury
Pb Lead

Downloaded from www.Manualslib.com manuals search engine

Labels on plastic casing parts

Please avoid sticking your own labels on plastic parts wherever possible, since this makes it difficult to recycle them.

Returns, recycling and disposal

Please handle returns, recycling and disposal in accordance with local regulations.

The device must not be disposed of with domestic waste. This device is labeled in compliance with European directive 2002/96/EC on waste electrical and electronic equipment (WEEE).

This directive sets the framework for returning and recycling used equipment and is valid across the EU. When returning your used device, please use the return and collection systems available to you. Further information can be found at *http://ts.fujitsu.com/recycling*.

Details regarding the return and recycling of devices and consumables within Europe can also be found in the "Returning used devices" manual, via your local Fujitsu branch or from our recycling center in Paderborn:

Fujitsu Technology Solutions
Recycling Center
D-33106 Paderborn

Tel. +49 5251 525 1410
Fax +49 5251 525 32 1410

Downloaded from www.Manualslib.com manuals search engine

5 Hardware installation

CAUTION!

- Follow the safety instructions in the chapter "Important information" on page 27.
- Do not expose the server to extreme environmental conditions (see "Ambient conditions" on page 22). Protect the server from dust, humidity and heat.
- Make sure that the server is acclimatized for the time indicated in this table before putting it into operation.

Temperature difference (°C)	Minimum acclimatization time (hours)
5	3
10	5
15	7
20	8
25	9
30	10

Table 1: Acclimatization time

In the table "Acclimatization time", the temperature difference refers to the difference between the operating environment temperature and the temperature to which the server was exposed previously (outside, transport or storage temperature).

Downloaded from www.Manualslib.com manuals search engine

5.1 Unpacking the server

CAUTION!

Follow the safety instructions in "Important information" on page 27. (For the Japanese market, please refer to " 安全上のご注意 ".)

Do not unpack the server until it is at its installation location.

- ► Transport the server to the place where you want to set it up.
- ► Unpack all individual parts.

  Keep the original packaging in case you want to transport the server again (applies only to EMEA market).
- ► Check the delivery for any damage during transport.
- ► Check whether the items delivered match the details on the delivery note.
- ► Notify your supplier immediately should you discover that the items delivered do not correspond to the delivery note.

Downloaded from www.Manualslib.com manuals search engine

5.2 Setting up the server

- ► Transport the server to the place where you want to set it up.
- ► Unpack the server (see section "Unpacking the server").
- ► Set up the server.

CAUTION!

- – The device must be protected from direct sunlight.
- – The required minimum distances for operation and maintenance areas must be adhered to.
- – The server must be accessible at the rear for connection to other devices (e.g. memory subsystem).
- – The mains plug must be accessible easily and safely.
- – There must be a clearance of at least 200 mm in front of and behind the server to ensure adequate ventilation of the subsystem.

- ► Wire the server. Follow the instructions in sections "Connecting devices to the server" on page 46 and "Notes on connecting/disconnecting cables" on page 49.
- ► Connect the server to the mains (see section "Connecting the server to the mains" on page 47).

Downloaded from www.Manualslib.com manuals search engine

5.3 Connecting devices to the server

The connectors for external devices are on the front and rear of the server. The additional connectors available on your server depend on the expansion cards installed. For further information refer to the “PRIMERGY TX100 S3 Server Upgrade and Maintenance Manual”. The standard connectors are indicated by symbols and color coding:

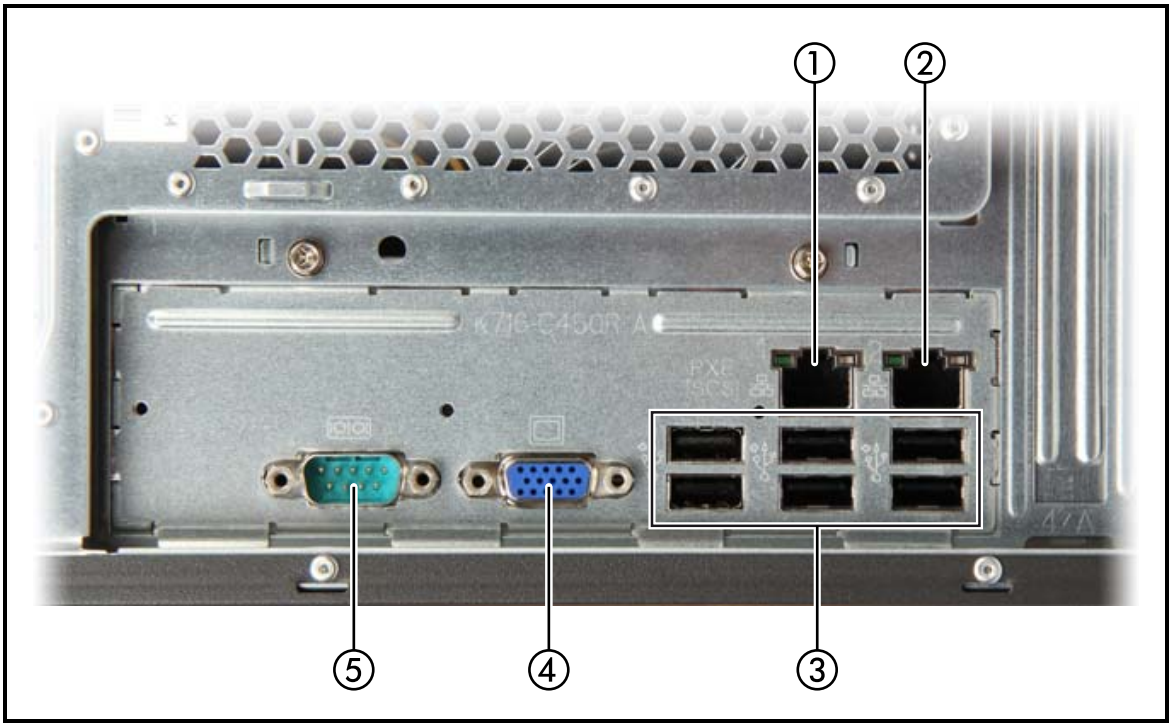

Figure 2: Connector panel on the rear side

1	Standard LAN1 connector
2	Standard LAN2 connector
3	USB connectors (x 6)
4	Video connector (blue)
5	Serial connector COM1 (turquoise)

Some of the devices that can be connected may require special drivers (see the documentation for the connected device).

► Connect the data cables to the server and peripherals.

Downloaded from www.Manualslib.com manuals search engine

Two additional USB connectors are located on the front of the server (see figure 5 on page 52).

Connecting the monitor

- ► Connect the monitor to the video connector of the server (see figure 2 on page 46).
- ► Connect the power cable of the monitor to a grounded mains outlet of the in-house mains.

CAUTION!

The rated current for the monitor is indicated on the technical data label on the monitor or in the operating manual for the monitor.

5.4 Connecting the server to the mains

The server is equipped with an integrated power supply unit.

CAUTION!

The server is automatically set to a mains voltage in the range 100 V - 240 V. You may only operate the server if its rated voltage range corresponds to the local mains voltage.

- ► Connect the power cord to the server power supply unit.
- ► Connect the mains plug to a grounded mains outlet in the in-house power supply network.

Downloaded from www.Manualslib.com manuals search engine

Securing the power cord

Figure 3: Securing power cord

- ► Loop the cable past the cable tie mounting bracket as shown.
- ► Close the cable tie around the power cord (1) and pull tight (2) to secure the power cord.

Downloaded from www.Manualslib.com manuals search engine

5.5 Notes on connecting/disconnecting cables

CAUTION!

Always read the documentation supplied with the device you wish to connect.

Never connect, or disconnect cables during a thunderstorm.

Never pull on a cable when disconnecting it. Always take hold of the cable by the plug.

Follow the sequence described below to connect or disconnect external devices to or from the server:

Be sure to wait for 10 seconds or more after shutdown before turning the server on.

Connecting cables

- ► Turn off all power and equipment switches.
- ► Disconnect all power plugs from the properly grounded power outlets.
- ► Connect all cables to the server and peripherals.
- ► Plug all data communication cables into the utility sockets.
- ► Plug all power cords into the properly grounded power outlets.

Disconnecting cables

- ► Turn off all power and equipment switches.
- ► Disconnect all power plugs from the properly grounded power outlets.
- ► Unplug all data communication cables from the utility sockets.
- ► Disconnect the relevant cables from the server and all the peripherals.

For connecting or disconnecting LAN cables, the server does not need to be powered off. To avoid loss of data teaming function has to be enabled.

Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

6 Starting up and operation

CAUTION!

Follow the safety instructions in chapter "Important information" on page 27.

6.1 Opening the server

Figure 4: Removing the cover

- ► Pull up on the locking lever (1).
- ► Open the side cover (2).
- ► Remove the side cover (3).

Downloaded from www.Manualslib.com manuals search engine

6.2 Control elements and indicators

6.2.1 Front of the server

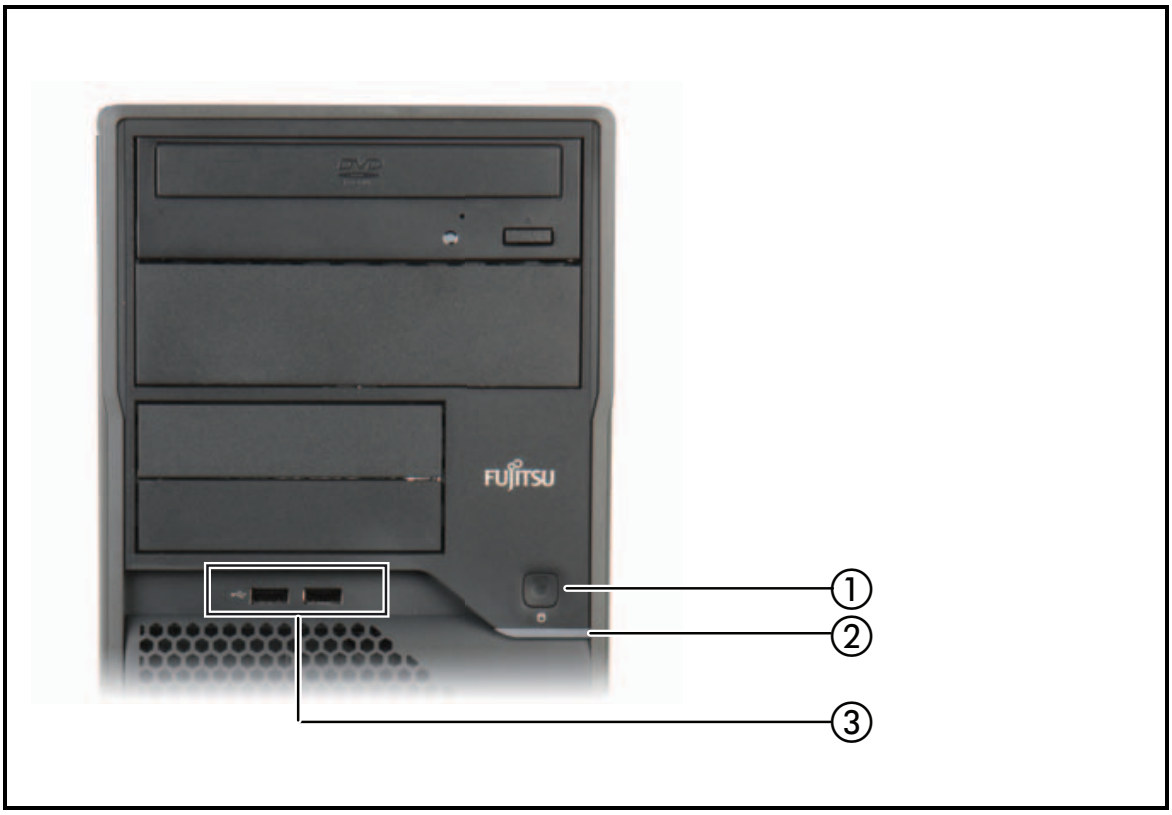

Figure 5: Front panel

1	Power-on indicator / On/Off button	3	USB connectors (x2)
2	HDD activity indicator		

Downloaded from www.Manualslib.com manuals search engine

6.2.1.1 Control elements

On/Off button

When the system is switched off, it can be switched on again by pressing the On/Off button.

When the system is operating, pressing the On/Off button will switch off the system.

CAUTION!

Risk of loss of data!

The On/Off button does not disconnect the server from the mains voltage. To disconnect from the mains completely, remove the power plug(s).

6.2.1.2 Indicators on the control panel

Power indicator (green)

Glows green when the server is switched on.

Is dark when the server is switched OFF, but mains voltage is present (standby mode).

HDD activity indicator (green)

Lights up green when an internal hard disk drive is accessed.

Downloaded from www.Manualslib.com manuals search engine

6.2.2 Rear of server

6.2.2.1 Indicators on the connector panel: LAN indicators

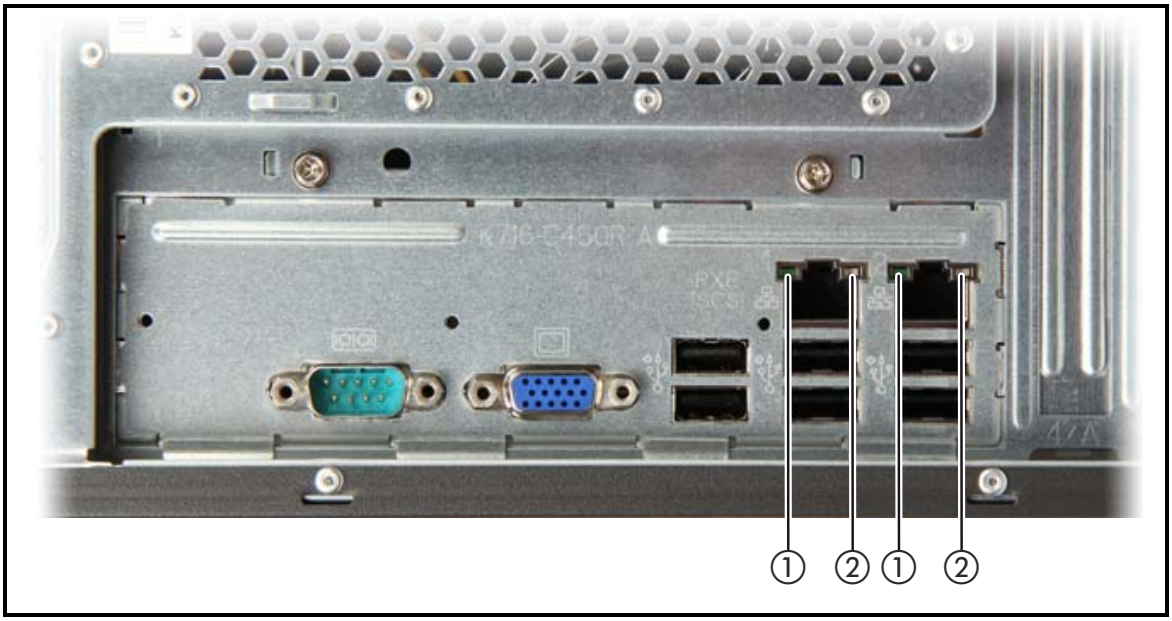

Figure 6: Indicators on the connector panel: LAN indicators

1	LAN link/transfer	**Steady green signal** when a LAN connection exists. **Remains dark** when no LAN connection exists. **Flashes green** when LAN transfer takes place.
2	LAN speed	**Steady yellow signal** in the event of a LAN transfer rate of 1 Gbit/s **Steady green signal** in the event of a LAN transfer rate of 100 Mbit/s. **Remains dark** in the event of a LAN transfer rate of 10 Mbit/s.

Downloaded from www.Manualslib.com manuals search engine

6.3 Switching the server on and off

CAUTION!

- If nothing appears on the screen but flickering stripes after switching on the server, switch the server off immediately (see chapter "Flickering stripes on monitor screen" on page 69).
- The On/Off button does not disconnect the server from the mains voltage. To completely disconnect it from the mains voltage, remove the power plug(s) from the socket(s).
- Do not move, strike, or shake the server when it is turned on. This can damage the hard disk in the server and cause data loss.
- Turn the server on when the temperature is in its operating environment range (10–35°C). For details on the operating environment, refer to "Safety Precautions".When operating the device outside of this operating environment, the server may operate improperly, damage data etc.Furthermore, Fujitsu cannot be held responsible for any related damage, malfunction, or loss of data, etc.
- Be sure to wait for 10 seconds or more after shutdown before turning the server on.
- After connecting power cable, press a power supply button after it passes for more than 10 seconds.

Switching the server on

– **Starting up for the first time:**

For the Japanese market, please refer to " はじめにお読みください ".

► Press the On/Off button (see item 1 in figure 5 on page 52).

► Insert ServerView Suite DVD 1 in the DVD drive.

► Follow the on-screen instructions (see also section "Configuring the server and installing the operating system with the ServerView Installation Manager" on page 61 or section "Configuring the server and installing the operating system without the ServerView Installation Manager" on page 62).

Downloaded from www.Manualslib.com manuals search engine

– **System already installed**:

  ► Press the On/Off button (see item 1 in figure 5 on page 52).

  The server is switched on, performs a system test and boots the operating system.

– **Starting the system with a 0-Watt device**:

  This 0-Watt device is equipped with a push button mains switch (1). This switch is used to switch on a 0-Watt device when the lithium battery is discharged.

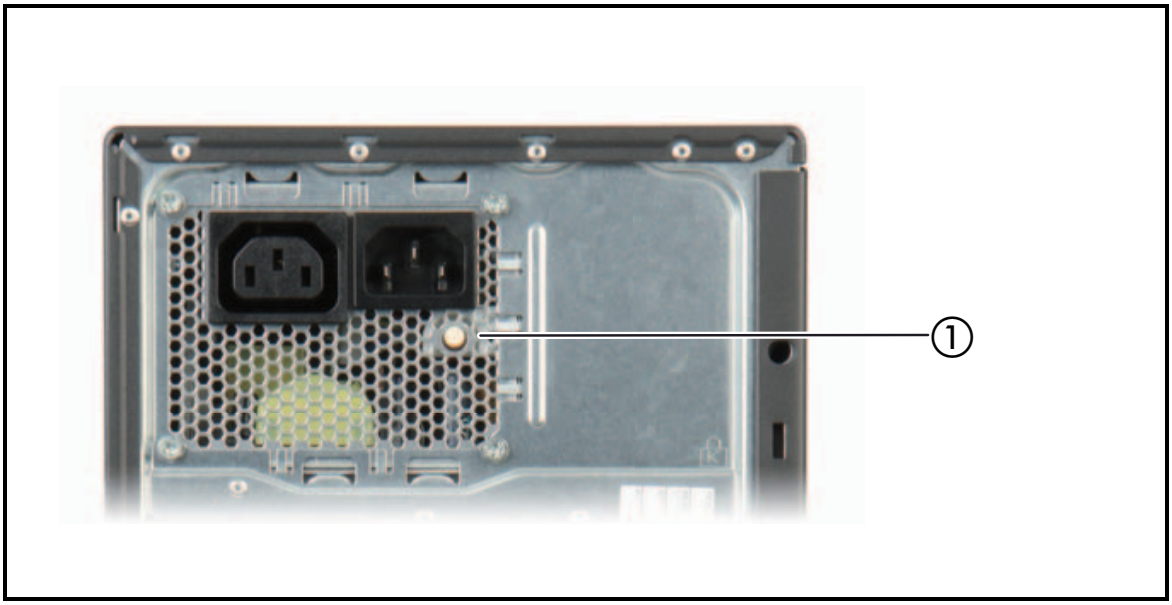

Figure 7: 0-Watt device

  ► Press the push button mains switch one-time.

  ► Press the On/Off button on the front of the server.

Switching the server off

► Shut down the operating system properly.

  The server is switched off automatically and goes into standby mode.

If the operating system does not switch the server off automatically, press the On/Off button for at least four seconds and/or send a corresponding control signal.

Downloaded from www.Manualslib.com manuals search engine

Other On/Off options

Besides the On/Off button, the server can be switched ON and OFF in the following ways:

– **Timer-controlled switch-on/off**

  Using the ServerView Operations Manager, you can configure that the server is switched on/off controlled by timer.

– **Ring indicator**

  The server is switched on by an internal or external modem.

– **Wake up On LAN (WOL)**

  The server is switched on by a command via the LAN (Magic Packet™) (LAN1 only).

– **After power failure**

  The server automatically reboots following a power failure (depending on the settings in the BIOS).

Downloaded from www.Manualslib.com manuals search engine

– **Power button override**

The system can be switched off by pressing and holding down the On/Off button (for approximately 4 - 5 seconds).

CAUTION!

There is a risk that data may be lost.

CAUTION when turning the power off (Windows Server 2008)!

The operation of the power switch can be specified as "Do Nothing", "Stand by", "Hibernate", and "Shutdown" depending on the OS settings. The default is "Shutdown".

On this server, functions corresponding to "Stand by" and "Hibernate" are supported as BIOS and hardware functions. However, some drivers and software installed in the server do not support these functions. For this reason, functions corresponding to "Stand by" and "Hibernate" are unavailable on this server. When the operating mode is set to "Stand by" or "Hibernate", the system may operate improperly or hard disk data may be corrupted.

For details about operating mode settings, refer to the manual supplied with the OS.

Downloaded from www.Manualslib.com manuals search engine

6.4 Configuring the server

This section contains information about configuring the server and installing the operating system.

Make sure that the power saving functions are disabled in the *Power* menu of the BIOS Setup during operation.

6.4.1 Configuring the onboard SATA controller

A SATA controller is integrated on the system board. You can configure the onboard SATA controller either before or during installation with the ServerView Installation Manager. Using the ServerView Installation Manager is recommended.

The controller has its own configuration utility. For further information, refer to the “Embedded MegaRAID Software User’s Guide” (on the ServerView Suite DVD 2 under *Industry Standard Servers* - *Expansion Cards* - *Storage Adapters* - *LSI RAID / SCSI Controllers*).

Descriptions of operating systems not covered in the controller manual are provided in the corresponding readme files on the driver CDs.

Downloaded from www.Manualslib.com manuals search engine

6.4.2 Configuring the SAS/SATA RAID controller

The server has a SAS/SATA RAID controller with "Integrated Mirroring Enhanced" functionality or "MegaRAID functionality". You can configure the SAS/SATA RAID controller either before or during installation with the ServerView Installation Manager. Using the ServerView Installation Manager is recommended.

The controller makes a separate utility available for IME configuration. For further information, refer to the "Integrated RAID for SAS User's Guide" (on the ServerView Suite DVD 2 under *Industry Standard Servers* - *Expansion Cards* - *Storage Adapters* - *LSI RAID / SCSI Controllers*).

A separate utility is available to the controller for MegaRAID configuration. For further information, refer to the "SAS Software User's Guide" (on the ServerView Suite DVD 2 under *Industry Standard Servers* - *Expansion Cards* - *Storage Adapters* - *LSI Configuration Software*).

Further information on modular RAID controllers is provided in the "Modular RAID Controller Installation Guide" (on the ServerView Suite DVD 2 under *Industry Standard Servers* - *Expansion Cards* - *Storage Adapters* - *LSI RAID / SCSI Controllers*).

Descriptions of operating systems not covered in the controller manual are provided in the corresponding readme files on the driver CDs.

Downloaded from www.Manualslib.com manuals search engine

6.4.3 Configuring the server and installing the operating system with the ServerView Installation Manager

Using the ServerView Installation Manager on the ServerView Suite DVD 1 provided, you can conveniently configure the server and install the operating system. This includes configuring the server-specific settings using the ServerView Configuration Manager and configuring the RAID controller using the **ServerView RAID Manager**.

Advantages of the ServerView Installation Manager

– Wizard assisted configuration of your server hardware and disk arrays

– Wizard assisted installation of all leading server operating systems

– Wizard-assisted creation of configuration files for unattended installation of several PRIMERGY servers with identical hardware configurations.

– Installation of drivers and additional software.

The software that can be installed depends on your server's hardware configuration. This configuration is detected automatically.

Descriptions of operating systems not covered in the RAID controller manual are provided in the corresponding readme files on the driver CDs.

To find out how to operate the ServerView Installation Manager and for further information, refer to the associated manual.

If you are using the ServerView Installation Manager, you can skip the following section on how to configure the server and install the operating system. Continue from section "Cleaning the server" on page 63.

Downloaded from www.Manualslib.com manuals search engine

6.4.4 Configuring the server and installing the operating system without the ServerView Installation Manager

Configure onboard SATA controller

Configure the controller as described in section "Configuring the onboard SATA controller" on page 59.

Configure SAS/SATA RAID controller with "Integrated Mirroring Enhanced"

Configure the controller as described in section "Configuring the SAS/SATA RAID controller" on page 60.

Configure SAS/SATA RAID controller with "MegaRAID functionality"

Configure the controller as described in section "Configuring the SAS/SATA RAID controller" on page 60.

Installing the operating system

- ► Insert the CD/DVD for the operating system you want to install.
- ► Reboot the server.
- ► Follow the instructions on screen and in the manual for the operating system.

Downloaded from www.Manualslib.com manuals search engine

6.5 Cleaning the server

CAUTION!

Switch the server off and disconnect the power plugs from the properly grounded power outlets.

Do not clean any interior parts yourself; leave this job to a service technician.

Do not use any cleaning agents that contain abrasives or may corrode plastic.

Ensure that no liquid enters the system. Ensure that the ventilation areas of the server and the monitor are clear.

Do not use any cleaning sprays (including flammable types). It may cause a device failure or a fire.

Clean the keyboard and the mouse with a disinfecting cloth.

Wipe the server and monitor casing with a dry cloth. If particularly dirty, use a cloth that has been moistened in a mild domestic detergent and then carefully wrung out.

Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

7 Property and data protection

To prevent it being removed from its location, the server can be secured to a fixed object with a steel cable running through a clip on the back.

To protect the system and data internally against unauthorized access, you can activate the security functions of the BIOS Setup.

7.1 BIOS Setup security functions

The *Security* menu in BIOS Setup offers various options for protecting your data from unauthorized access. By combining these options, you can achieve optimum protection for your system.

A detailed description of the *Security* menu and how to assign passwords can be found in the BIOS Setup documentation on the PRIMERGY ServerView Suite DVD 2.

Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

8 Troubleshooting and tips

CAUTION!

Follow the safety instructions in the "Safety notes and regulations" manual or " 安全上のご注意 " and in chapter "Important information" on page 27.

If a fault occurs, attempt to resolve it using the measures described:

– in this chapter,
– in the documentation for the connected devices,
– in the help systems of the software used.

If you fail to correct the problem, proceed as follows:

- ► Make a list of the steps performed and the circumstances that led to the fault. Also make a list of any error messages that were displayed.
- ► Switch off the server.
- ► Contact our customer service team.

8.1 Power-on indicator remains unlit

The power-on indicator remains dark after you switch on your device.

Power cable incorrectly connected

- ► Make sure that the power cable(s) is/are correctly connected to the server and the grounded power outlet(s).

Power supply overloaded

- ► Disconnect the server power plug(s) from the grounded power outlet(s).
- ► Wait a few minutes before you plug it/them into the grounded power outlet(s) again.
- ► Switch on your server.

Downloaded from www.Manualslib.com manuals search engine

8.2 Server switches itself off

Server Management has detected an error

- ► Check the error list of System Event Log in ServerView Operations Manager, and attempt to eliminate the error.

8.3 Screen remains blank

Monitor is switched off

- ► Switch on your monitor.

Screen has gone blank

- ► Press any key on the keyboard.

  or

- ► Deactivate screen saver. Enter the appropriate password.

Brightness control is set to dark

- ► Set the brightness control on the monitor to light. For detailed information, refer to the operating manual supplied with your monitor.

Power cable or monitor cable not connected

- ► Switch off the monitor and the server.
- ► Check whether the power cable is properly connected to the monitor and to the grounded power outlet.
- ► Check whether the monitor cable is properly connected to the server and monitor (if it is plugged in with a connector). If a separate graphics card is installed in the server, then the monitor cable must be connected to the graphics card.
- ► Switch on the monitor and the server.

Downloaded from www.Manualslib.com manuals search engine

8.4 Flickering stripes on monitor screen

CAUTION!

Switch off the server immediately. Risk of damaging the server.

Monitor does not support the set horizontal frequency

- ► Find out which horizontal frequency your monitor screen supports. You will find the horizontal frequency (also known as line frequency or horizontal deflection frequency) in the documentation for your monitor.
- ► Refer to the documentation for your operating system or the software for the screen controller for details of how to set the correct horizontal frequency for your monitor, and follow the procedure accordingly.

8.5 No screen display or display drifts

The wrong horizontal frequency or resolution has been selected for the monitor or for the application program.

- ► Find out which horizontal frequency your monitor screen supports. You will find the horizontal frequency (also known as line frequency or horizontal deflection frequency) in the documentation for your monitor.
- ► Refer to the documentation for your operating system or the software for the screen controller for details of how to set the correct horizontal frequency for your monitor, and follow the procedure accordingly.

8.6 No mouse pointer displayed on screen

Mouse driver not loaded

- ► Check whether the mouse driver is properly installed and is activated when the application program is started. Detailed information can be found in the user manuals for the mouse, the operating system and the application program.

Downloaded from www.Manualslib.com manuals search engine

8.7 Incorrect date and time

► Set the date and time in the operating system or in the BIOS Setup under the *Main* menu, using *System Date* and *System Time* respectively.

Note that the operating system may affect the system time. For example, the operating system time may deviate from the system time under Linux, and would overwrite the system time in the default setting on shutdown.

If the date and time are still wrong after the server has been switched off and back on again, replace the lithium battery (for a description refer to the PRIMERGY TX100 S3 Server Upgrade and Maintenance Manual) or contact our customer service team.

8.8 Drives reported as “dead” when starting system

This error message can occur when the onboard SAS controller has RAID functionality or the server is equipped with a PCI RAID controller.

RAID controller configuration incorrect

► Check and correct the settings for the drives using the RAID controller utility.

Further information is provided in the manual for the RAID controller.

8.9 Added drive reported as defective

RAID controller is not configured for this drive

The drive was probably installed when the system was switched off.

► Reconfigure the RAID controller for the drive using the corresponding utility. Information is provided in the documentation for the RAID controller.

or

► Remove and reinstall the drive while the system is switched ON.

If the drive continues to be shown as defective, then replace it.

Downloaded from www.Manualslib.com manuals search engine

8.10 Error message on screen

The meaning of the error message is explained in the documentation for the relevant components and programs on the ServerView Suite DVD 2.

8.11 Expansion cards or onboard devices not recognized

When an expansion card is added, other expansion cards or onboard devices might not be recognized.

- ► Reinstall the drivers for the expansion cards or onboard devices that are not recognized.

8.12 Temperature warning

A temperature warning is output to the hardware event log and OS event log, or ServerView issues a notification of a temperature warning such as by a popup message

The above log is output or the above notification is issued by ServerView when the ambient temperature is within 30 to 35°C, which is near the upper limit of the temperature boundaries (10 to 35°C). This is to notify the administrator before the ambient temperature actually exceeds the range of the temperature boundaries.

- ► Although continued use within the temperature boundaries poses no problems within itself, reconsider the surrounding environment conditions if this log is output or if ServerView issues this notification.

8.13 No effect of keyboard or mouse

Typing the keyboard does not display any characters, or the mouse cursor does not move.

- ► Check to see whether the keyboard and mouse are connected properly. If they are not connected or you replaced them yourself, then connect the cables to the server.

Downloaded from www.Manualslib.com manuals search engine

8.14 Optical drive cannot read data

- Check to see whether the CD/DVD/BD is inserted properly. If it is not inserted, correctly insert the disk so that the label is facing up.
- Check to see whether the CD/DVD/BD is not dirty. If it is dirty, wipe it with a soft, dry cloth.
- Check to see whether the CD/DVD/BD is not scratched or bent. If scratched or damaged, replace the CD/DVD/BD.

Downloaded from www.Manualslib.com manuals search engine